




City of NORFOLK

C: Dir., Department of Planning and Community Development

To the Honorable Council
City of Norfolk, Virginia

November 26, 2013


From: George M. Homewood, AICP, CFM 
Acting Planning Director

Subject: Zoning Ordinance Text Amendment to Chapters 2, "Definitions," and 11-3, "Floodplain/Coastal Hazard Overlay District (FPCHO)," to amend terms, simplify language and to add requirements for properties located within the floodplain and to revise standards for calculating building height.


Reviewed: Ronald H. Williams, Jr.,
Assistant City Manager

Ward/Superward: Citywide

Approved: 
Marcus D. Jones, City Manager

Item Number:  **PH-1**

I. **Recommendation:** Approval, subject to the revisions as outlined in the staff report.

II. **Applicant:** City Planning Commission

III. **Description:**

This agenda item is for a Text Amendment to add requirements for properties located within designated floodplains and to revise how height of structures is measured in order to better protect new and substantially improved structures from the impacts of flooding.

IV. **Analysis**

Plan Analysis

- The Promoting Environmental Sustainability chapter of *plaNorfolk2030* calls for the City to prepare for the consequences of natural hazards.
 - The chapter calls for evaluating options to mitigate the impacts of flooding and improving the City's rating in the National Flood Insurance Program's Community Rating System (CRS).
 - The proposed changes to the *Zoning Ordinance* are consistent with the recommendations of these provisions.

Zoning Analysis

- Over 44,000 parcels in the city, or 25% of the land area, are potentially at risk of flooding
- The *Zoning Ordinance* provides regulations governing structures located within areas susceptible to flooding, establishing standards that are beyond the minimum standards established by the Uniform Statewide Building Code.
- Additional requirements, above the standards in the current ordinance, have been proposed by the City Planning Commission.
 - The proposed regulations would protect principal structures to a greater degree than the current requirements.

Existing Regulations	Planning Commission's Proposed Regulations
Review of development in the Special Flood Hazard Areas only at the permit stage.	Require review of development in Special Flood Hazard Areas at additional stages of construction, with certification by a licensed design professional.
Require the first floor level be elevated one (1) foot above the anticipated flood levels.	Require the first floor level be elevated three (3) feet above the anticipated flood level.
No reference to Coastal A Zone designation.	Identify Coastal Floodplain Districts (Coastal A Zone) and establish regulations.
No minimum setback from water required.	Twenty-foot setback from the landward edge of mean high water required.
No requirements for areas with no more than a 0.2% chance of flooding annually.	Require principal structures within 0.2% annual chance of flood to have a first floor 18 inches above grade or be floodproofed.
Prohibit basements in Special Flood Hazard Areas.	Prohibit the construction of enclosed spaces below grade on all sides in Special Flood Hazard Areas.
Permit breakaway walls.	Prohibit the use of breakaway walls.
Measure building height from the ground level.	Measure building height from the City required elevation or at ground level, whichever is higher.
Require existing buildings come into compliance with current regulations if damage or improvements from a single event exceeds 50% of market value of the structure.	Require existing buildings come into compliance with current regulations once the sum of damage and/or improvements exceeds 50% of market value of structure over a 10-year period (Cumulative Loss/Improvement) or If flood damage from two events, on average, each equals or exceeds 25% the market value of the structure (Repetitive Loss)

- The proposal to change the standard for measuring height will allow taller structures, but would allow existing principal structures to be raised and provide design flexibility for new structures without penalizing them for being located in a flood zone.

- The effect of this change may be noticeable in historic districts, but the only alternative for some historic buildings may be to raze the structure.
- The development requirements proposed by the Planning Commission are consistent with the city-wide effort to address and mitigate for flooding problems in the City of Norfolk.
- The Virginia Department of Conservation and Recreation has reviewed the Planning Commission proposal, concluding that it "is well drafted and reflects an admirable level of attention to floodplain management."
- The Hampton Roads Realtor Association (HRRA) and Tidewater Builders Association (TBA) were generally supportive of the changes proposed by the Planning Commission, with the exception of those addressing cumulative loss.
 - They recommended that the period evaluated for requiring compliance with revised regulations be reduced to five years, potentially reducing the impact of the costs on some homeowners.
 - Staff supported the changes requested by HRRA and TBA.
- After the Planning Commission public hearing, the Willoughby Civic League expressed concern that damages from non-flood-related incidents were included in the repetitive loss provisions.
 - In subsequent discussions with the Federal Emergency Management Administration, it was clarified that only flood damages would be considered by FEMA for participation in the Repetitive Loss provisions of the program.
- City Council was briefed on the Planning Commission recommended changes on July 23.
 - City Council directed staff to bring forward an ordinance that reflects the concerns of HRRA, TBA, and the Willoughby Civic league.
 - The period of time addressed by the cumulative and repetitive loss provisions should be reduced to five years.
 - Only flood-related damage should be considered in the repetitive loss provisions.
 - These changes will enable property owners to participate in FEMA's Increased Cost of Compliance Program.
 - City Council directed that staff re-examine the requirement for elevating houses 3 feet above flood levels and consider whether 2 feet might be more appropriate.
 - After evaluating the costs associated with raising houses, the associated insurance savings, and the projections of additional increases in sea level over the next 30 years, staff recommends that the 3 feet increase recommended by the Planning Commission be maintained.
- The table below outlines the changes made in the attached ordinance from what was recommended by the Planning Commission.

Planning Commission Recommendation	Administration Revision
Require existing buildings come into compliance with current regulations once the sum of any damage and/or improvements exceeds 50% of market value of structure over a 10-year period.	Deleted
Require existing buildings come into compliance with current regulations if flood damage from two events, on average, each equals or exceeds 25% the market value of the structure.	Require existing buildings come into compliance with current regulations if flood damage from two events, on average, each equals or exceeds 25% the market value of the structure <u>and the building is structurally damaged or altered.</u>
Consider damage from both flood and non-flood events in calculating the cumulative impact of damages on a home in order to determine when compliance with flood regulations should be required.	Consider <u>only flood damages</u> to calculate the cumulative impact on a property, <u>unless the non-flood damage exceeds 50% of the market value of the residence,</u> in determining when compliance with flood regulations should be required.
Require the first floor level be elevated three (3) feet above the anticipated flood level.	Maintain this provision.

Traffic Analysis

N/A

V. Financial Impact

- The proposed changes are intended to improve the City's rating in the Community Rating System program, providing additional discounts to property owners on the cost of flood insurance.
- The proposed changes will increase construction costs of new construction and major improvements to existing structures.
 - The effective date of the revisions is recommended to be January 1, 2014 to reduce the impact on projects currently under design.
- Structures built to the proposed requirements will benefit from reduced flood insurance premiums over structures built under the current requirements.
 - The reduction of insurance premiums may be large enough to amortize the added construction cost over a relatively short period of time, generally less than eight years.
- Inclusion of the repetitive loss provision provides access to funds for property owners who are seeking to raise their residence to comply with the current regulations.
- The proposed standards should reduce the total cost of ownership of new construction when combining insurance costs with acquisition costs.

VI. Environmental

- Properties built in accordance with the proposed regulations will be more resilient to flooding and wave action.

- The proposed regulations will provide better protection for slopes and wetlands near mean high water and will protect foundations from water damage.

VII. Community Outreach/Notification

- Public notice was posted on the City of Norfolk website on May 10.
- Public meetings for citizen and professional input were held on May 14, 17, 24, and June 20.
 - A summary of the comments received is attached.
- Letters were mailed to all registered Civic League Presidents on May 10 and June 5.
- Notice was sent to the civic leagues by the Department of Communications on May 3 and June 12.
- A meeting was held with representatives of HRRRA and TBA on June 3.
 - Generally, both associations were in favor of the proposed regulation changes to better protect citizens, property, and investments.
 - Both requested that the period for tracking the value of improvements and losses be reduced to five years.
- Meetings were held with the Ghent Neighborhood League (on June 12) and the Willoughby Civic League (on July 12).
 - The Ghent Neighborhood League requested no modifications to the Planning Commission proposed ordinance.
 - The Willoughby Civic League requested that only flood damages be considered in determining the effect of multiple damage events on determining when compliance would be required.
- The Planning Commission Public Hearing was held on June 27.
 - Two citizens spoke in support.
 - Letters of support, with some changes, were received from TBA and HRRRA.
 - A letter of opposition was received from the Beacon Light Civic League.
 - One citizen submitted a letter of opposition, based on the height required for elevating homes above flood level.
- A meeting was held with the Willoughby Civic League (on October 22) to further discuss their concerns and present the revised changes.
 - A letter was received thanking staff for continuing to work through concerns.
- After reviewing the staff changes, HRRRA provided a letter of support.
- Public notification for this agenda item was conducted through the City of Norfolk's agenda notification process.

VIII. Board/Commission Action

- By a vote of **6 to 0**, the Planning Commission recommended that the ordinance changes be **approved** as developed by the Planning Commission based on maximizing the benefits of flood protection on area property owners and residents.
 - The ordinance that will be the subject of the public hearing reflects the changes directed by City Council on July 23 rather than the ordinance as proposed by the Planning Commission.

IX. Coordination/Outreach

This request has been coordinated with the Departments of Emergency Preparedness, Public Works and Planning and Community Development and the City Attorney's Office.

Supporting Material from the Department of Planning and Community Development

- Proponents and Opponents
- Ordinance as recommended by staff
- Language recommended by the Planning Commission
- Summary of Comments from public meetings
- Civic League letters
- Letter of opposition
- Letter from Hampton Roads Realtors Association
- Letter from Tidewater Builders Association

Proponents and Opponents

Proponents

William Stiles
1121 Graydon Avenue
Norfolk, VA 23507

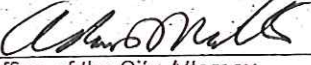
Shannon Hulst
1121 Graydon Avenue
Norfolk, VA 23507

Proponents with objections

Joshua Clark
2117 Smith Avenue
Chesapeake, VA 23320

Andrew M. Sinclair
638 Independence Parkway, Suite 100
Chesapeake, VA 23320

6/28/13 tsv
Form and Correctness Approval:

By 
Office of the City Attorney

NORFOLK, VIRGINIA

Contents Approved:

By 
DEPT.

ORDINANCE No.

AN ORDINANCE TO AMEND AND REORDAIN SECTION 2-3 AND SECTION 11-3 OF THE ZONING ORDINANCE OF THE CITY OF NORFOLK, 1992, IN ORDER TO ENHANCE FLOOD PROTECTION MEASURES BY ADJUSTING DEFINITIONS, SIMPLIFYING LANGUAGE, AND ADDING DEVELOPMENT REQUIREMENTS FOR PROPERTIES LOCATED IN THE FLOODPLAIN.

BE IT ORDAINED by the Council of the City of Norfolk:

Section 1:- That Section 2-3 of the Zoning Ordinance of the City of Norfolk, 1992 (as amended), entitled "Definitions," is hereby amended and reordained to amend the definition of "Building height" in order to account for any applicable flood elevation requirements. The text shall read as set forth in "Exhibit A," attached hereto.

Section 2:- That Section 11-3 of the Zoning Ordinance of the City of Norfolk, 1992 (as amended), entitled "Floodplain/Coastal Hazard Overlay Districts FPCHO," is hereby amended and reordained so as to enhance flood protection measures by adjusting definitions, simplifying language, and adding development requirements for properties located in the floodplain. The text shall read as set forth in "Exhibit B," attached hereto.

Section 3:- That this ordinance shall be effective on January 1, 2014 and thereafter.

ATTACHMENTS:

Exhibit A (1 page)
Exhibit B (18 pages)

EXHIBIT A

2-3 Definitions.

...

Building height. The height of any structure or building measured as the vertical distance between the Roof Line and the Base, excluding any ancillary mechanical equipment, cupolas, chimneys, church steeples, flagpoles, rooftop penthouses for elevators or stairways, and similar ancillary features. For purposes of this definition only:

(a) The term "Roof Line" shall mean:

- (1) For a flat roof, the highest point of the roof surface;
- (2) For a mansard roof, the deck line; and
- (3) For a gable, hip or gambrel roof, the mean point between eaves and ridge.

(b) The term "Base" shall mean:

- (1) For principal structures, either the ground immediately adjacent to the structure at the midpoint of its main entrance or the Design Flood Elevation as defined in Chapter 11-3 of this ordinance, whichever is higher; and
- (2) For all other structures, including accessory structures, the ground immediately adjacent to the structure at the midpoint of its main entrance.

...

EXHIBIT B

11-3 Floodplain/Coastal Hazard Overlay Districts FPCHO.

11-3.1 *Purpose.*

- (a) *Intent.* It is the intent of these regulations to permit the creation of Floodplain, Coastal Floodplain and Coastal High Hazard Districts in areas designated by the Federal Emergency Management Agency (FEMA) as "Special Flood Hazard Areas" and other areas identified as likely to benefit from floodplain management. Regulations within such districts are intended to prevent the loss of property and life, the creation of health and safety hazards, the disruption of commerce and governmental services, the extraordinary and unnecessary expenditure of public funds for flood protection and relief, and the impairment of the tax base, all of which adversely affect the public health, safety, and general welfare. These flood losses are attributed to the cumulative effect of obstructions located in areas of special flood hazard, and the occupancy of areas of special flood hazard by uses and structures vulnerable to flood damage or structures inadequately elevated, anchored or flood-proofed.
- (b) *Scope of Regulations.* To accomplish these purposes, it is necessary to:
 - (1) Regulate uses, activities and development which, acting alone or in combination with other existing or future uses, activities and development, will cause unacceptable increases in flood heights, velocities and frequencies.
 - (2) Restrict or prohibit certain uses, activities and development from locating within certain areas of special flood hazards.
 - (3) Require all those uses, activities and development that do occur in areas of special flood hazards to be protected and/or flood-proofed against flooding, flood damage and wind damage.
 - (4) Protect individuals from buying lands and structures which are unsuited for certain purposes because of flood hazards.
 - (5) To ensure that adequate drainage is provided to reduce exposure to flood hazards.
- (c) *Findings.* The degree of flood protection sought by the provisions of

this overlay district is considered reasonable for regulatory purposes and is based on acceptable engineering methods of study. Larger floods may occur. Flood heights may be increased by man-made or natural causes. This overlay district does not imply that districts outside the floodplain district or that land uses permitted within such district will be free from flooding or flood damages.

11-3.2 *Applicability.* The boundaries of the "Special Flood Hazard Areas" and "Other Flood Areas" shall be designated by the "Flood Insurance Study" (FIS) issued by FEMA and shown on the city's Flood Insurance Rate Map (FIRM) dated September 2, 2009, as amended. This map, as amended, is declared to be part of this ordinance and shall be kept on file in the offices of the Building Official and of the Zoning Administrator. The components of the "Special Flood Hazard Areas" and "Other Flood Areas" shall be:

- (a) Coastal High Hazard District (VE)
- (b) Coastal Floodplain District (Coastal A)
- (c) Floodplain District (AE and AH)
- (d) Other Flood Areas (X Shaded)

11-3.3 *Compliance and Liability.*

- (a) *General.* No land shall hereafter be developed and no structure shall be located, relocated, constructed, reconstructed, enlarged, structurally altered or structurally improved nor any manufacture home placed on a lot or approved for utility service except in full compliance with the terms and provisions of this section and any other applicable ordinances and regulations.

Any development which alters or relocates a watercourse shall not diminish the flood-carrying capacity within the altered or relocated portion of the watercourse. Prior notification of any proposed development which would alter or relocate a watercourse in the City of Norfolk shall be provided to all affected, adjacent municipalities, the Federal Insurance Administration, and the Virginia Department of Conservation and Recreation or other state coordinating agency designated to assist with the National Flood Insurance Program.

No new construction or development shall cause an increase in the elevation of the water level of a one-hundred-year flood. It shall be the responsibility of the design professional and developer to demonstrate that a proposed development will not increase flood levels.

- (b) *Administration.* For purposes of this overlay district, any powers, duties, and responsibilities of the Zoning Administrator that are

described herein may also be exercised or discharged by any employee of the Department of Planning who is designated as the floodplain manager and is certified under the standards established by the Association of State Floodplain Managers.

- (c) *Recordkeeping.* Records of actions associated with administering this overlay district shall be kept on file and maintained by the Zoning Administrator or his designee. This shall specifically include maintaining copies of Elevation Certificates.
- (d) *No liability created.* This section shall not create liability on the part of the City of Norfolk or any officer or employee thereof for any flood damages that result from reliance on this overlay district or any administrative decision lawfully made there under.

11-3.4 *Abrogation and Greater Restrictions.*

The Special Flood Hazard Areas and Other Flood Areas as described above shall be overlays to the existing underlying districts as shown on the official zoning map, and as such, the provisions set forth in these floodplain regulations shall operate in conjunction with the underlying district provisions, as set forth in section 11-0. If there is any conflict between the provisions or requirements of this overlay district and those of any underlying district, the more restrictive provisions shall apply.

- 11-3.5 *Severability.* If any section, subsection, paragraph, sentence, clause, or phrase of this overlay district shall be declared invalid for any reason whatever, such decision shall not affect the remaining portions of this overlay district. The remaining portions shall remain in full force and effect; and for this purpose, the provisions of this overlay district are hereby declared to be severable.

- 11-3.6 *Penalty for Violations.* Any person who fails to comply with any of the requirements or provisions of this article or directions of the Zoning Administrator or his designee shall be guilty of a misdemeanor and subject to the penalties therefore.

In addition to the above penalties, all other actions are hereby reserved, including an action in equity for the proper enforcement of this article. The imposition of a fine or penalty for any violation of, or noncompliance with, this article shall not excuse the violation or noncompliance or permit it to continue; and all such persons shall be required to correct or remedy such violations or noncompliances within a reasonable time. Flood insurance may be withheld from structures constructed in violation of this article.

- 11-3.7 *Definitions.* For the purpose of these floodplain regulations, the following definitions shall apply:

Base flood: The flood having a one percent chance of being equaled or exceeded in any given year.

Base flood elevation (BFE): The elevation in feet of the one percent (1%) annual chance flood level, as shown in the FIS and FIRM.

Basement: Any area of a building having its floor sub-grade (below ground level) on all sides.

Breakaway wall: A wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces, without causing damage to the elevated portion of the building or supporting foundation system.

Coastal Floodplain District: Those areas identified as Coastal A Zones that have been delineated as being subject to wave heights between 1.5 feet and 3 feet and identified on the FIRM as areas of Limits of Moderate Wave Action (LiMWA).

Coastal High Hazard District: Those areas identified as VE Zones on the FIRM extending from offshore to the inland limit of the Coastal Primary Sand Dune, as defined by state law (Code of Virginia Title 28.2), and subject to wave heights of three (3) feet or more.

Damage, severe repetitive loss: Flood related damages to a structure sustained on two (2) separate occasions during a ten (10) year period for which the cost of repairs at the time of each flood event, on the average, equals or exceeds twenty-five percent (25%) of the market value of the structure before the most recent damage occurred.

Damage, substantial. Damage, of any origin, sustained by a structure for which the cost of restoring the structure to its condition before the damage occurred would equal or exceed fifty percent (50%) of the market value of the structure before the damage occurred.

Design Flood Elevation (DFE): The BFE plus the freeboard required by this ordinance.

Development: Any man-made change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

Elevation Certificate: A document, prepared by a professional land surveyor, engineer, or architect, on a form approved by FEMA that verifies

elevation and floodplain data of a structure relative to the ground level.

Encroachment: The advance or infringements of uses, plant growth, fill, excavation, buildings, permanent structures or development into a floodplain, which may impede or alter the flow capacity of a floodplain.

Flood or flooding:

- (a) A general or temporary condition of partial or complete inundation of normally dry land areas from either of the following:
 - (1) The overflow of inland or tidal waters; or
 - (2) The unusual and rapid accumulation or runoff of surface waters from any source.
- (b) The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in subparagraph (a)(1) of this definition.
- (c) Mudflows which are proximately caused by flooding as defined in subparagraph (a)(2) of this definition and are akin to a river of liquid and flowing mud on the surface of normally dry land areas, as when earth is carried by a current of water and disposed along the path of the current.

Floodplain or flood-prone area: Any land area susceptible to being inundated by water from any source

Floodplain District: Those areas designated as AE and AH Zones on the FIRM for which a one percent (1%) annual chance of flood elevations have been identified.

Flood Insurance Rate Map (FIRM): The official map on which FEMA has delineated both the Special Flood Hazard Areas and Other Flood Areas within the city. The FIRM may be available digitally.

Freeboard: The vertical distance between the BFE and the local minimum required lowest elevation in the AE, AH, VE, and Coastal A Zones that provides additional protection for the unknown or unquantified factors that could contribute to greater flood heights.

Historic structure: Any structure that is:

- (a) Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
- (b) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district; or
- (c) Individually listed on the Virginia Landmarks Register.
- (d) Designated individually as a landmark or as a contributing structure within a locally designated historic district, to the extent such designation is permitted under and done in accordance with provisions of Chapter 9 or this ordinance.

Lowest floor: The lowest floor of the lowest enclosed area (including basement). An unfinished or flood-resistant enclosure, usable solely for parking of vehicles, building access or limited storage in an area other than a basement area is not considered a building's lowest floor; provided, that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of Federal Code 44 CFR § 60.3.

Manufactured home: A structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. For floodplain management purposes the term manufactured home also includes park trailers, travel trailers, and other similar vehicles placed on a site for greater than 180 consecutive days.

Manufactured home park or subdivision: A parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

New construction: Structures for which the "start of construction" commenced on or after August 1, 1979.

Other Flood Areas: Those areas identified as X (Shaded) on the FIRM for which there is a one-fifth percent (0.2%) annual chance of flooding.

Recreational vehicle: A vehicle which is:

- (a) Built on a single chassis;
- (b) Measures four hundred (400) square feet or less when measured at the largest horizontal projection;
- (c) Designed to be self-propelled or permanently towed by a light duty truck; and
- (d) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational camping, travel, or seasonal use.

Repetitive loss damage: See "Damage, repetitive loss."

Shallow flooding area: A special flood hazard area with base flood depths from one (1) to three (3) feet where a clearly defined channel does not exist. Such flooding is characterized by ponding or sheet flow.

Special Flood Hazard Areas: The land in the floodplain subject to a one percent (1%) or greater annual chance of being flooded. These are designated as AE, AH, VE, and Coastal A on the FIRM.

Start of construction: The date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, substantial improvement or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation on the property of accessory structures, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of the construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

Substantial damage: See "Damage, substantial."

Substantial improvement: All reconstructions, rehabilitations, additions, or other improvements of a structure the cost of which equals or exceeds fifty percent (50%) of the market value of the structure before the "start of construction" of the improvement.

Notwithstanding the above, the term does not include any of the following:

- (a) Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions;
- (b) Any alteration of a "historic structure" provided that the alteration will not preclude the structure's continued designation as a "historic structure"; or
- (a) Any improvements associated solely with elevating a structure above the DFE.

Watercourse: A lake, river, creek, stream, wash, channel or other topographic feature on or over which waters flow at least periodically. Watercourse includes specifically designated areas in which substantial flood damage may occur.

11-3.8 *District Boundary Changes.* The delineation of any of the Special Flood Hazard Areas and Other Flood Hazard Areas may be revised by the City of Norfolk where natural or man-made changes have occurred and/or where more detailed studies have been conducted or undertaken by the U. S. Army Corps of Engineers or other qualified agency, or an individual documents the need for such change. However, prior to any such change, approval must be obtained from FEMA.

11-3.9 *Permit and Application Requirements.* All uses, activities, and development occurring within any floodplain district shall be undertaken only upon the issuance of a permit. Such development shall be undertaken only in strict compliance with the provisions of this ordinance, the Virginia Uniform Statewide Building Code, and all other applicable codes and ordinances. Prior to the issuance of any such permit, the Zoning Administrator or his designee shall require all applicants to demonstrate compliance with all applicable state and federal laws. It shall be the responsibility of a property owner to demonstrate that work proposed on existing structures does or does not constitute substantial improvement or repair of substantial damage. Under no circumstances shall any use, activity, and/or development adversely affect the capacity of the channels or floodways of any watercourse, drainage ditch, or any other drainage facility or system.

All applications for development within any Special Flood Hazard Area and all building permits issued for the floodplain shall incorporate the following information.

- (a) For any rehabilitation, installation of new electrical or mechanical systems, or any structural repair with an estimated cost that is less

than fifty percent (50%) of the market value of the structure, a current Elevation Certificate sealed by a licensed design professional is required.

(b) For any addition, any conversion of any non-habitable space to habitable space, or the construction or installation of a new accessory structure that requires a building permit:

(1) A current Elevation Certificate sealed by a licensed design professional, and

(2) A physical survey, performed after the effective date of the FIRM that,

(i) Accurately depicts current improvements on the property,

(ii) Provides a flood zone determination and the BFE at the site, and

(iii) Delineates the location of the flood zones on the property.

(c) For new construction and any substantial improvement of a principal structure:

(1) A proposed site plan sealed by a design professional that provides:

(i) Topographic data;

(ii) Proposed grades, grading and stormwater management;

(iii) All proposed structures and improvements;

(iv) Proposed finished floor elevations of structures;

(v) Flood zone determination and BFE with the FIRM reference, and

(vi) All other information as required by any applicable provision of Chapter 26, "Site Plan Review" or Section 11-2, "Chesapeake Bay Preservation Area Overlay District."

- (2) An Elevation Certificate based on the proposed development showing compliance with these floodplain regulations.
- (3) For non-residential structures proposed to be flood-proofed, a flood-proofing certificate based on the proposed development showing compliance with these floodplain regulations.
- (d) Any additional information deemed by the Zoning Administrator or his designee to be necessary to perform the required review.

11-3.10 *General Standards.* In the Floodplain, Coastal Floodplain and Coastal High Hazard districts the following provisions shall apply:

- (a) The Freeboard shall be three (3) feet.
- (b) Any new construction or substantial improvement to principal residential structures shall be a set back a minimum of twenty (20) feet from mean high water.
- (c) For residential construction, the lowest floor shall not be below grade on all sides.
- (d) New construction and substantial improvements shall be built in accordance with the Virginia Uniform Statewide Building Code, and anchored to prevent flotation, collapse or lateral movement of the structure and all portions at or below the DFE shall be constructed of materials resistant to flood damage.
- (e) Manufactured homes and accessory structures shall be anchored to prevent flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This standard shall be in addition to and consistent with the Virginia Uniform Statewide Building Code.
- (f) New construction or substantial improvements shall be constructed using methods and practices that minimize flood damage.
- (g) Electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities, including ductwork, shall be:
 - (1) Elevated and installed at or above the DFE; or
 - (2) Designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding or as allowed by the Virginia Uniform Statewide Building Code and ductwork shall be installed a minimum of

one (1) foot above the BFE.

- (h) New and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.
- (i) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters.
- (j) On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding.
- (k) For any structure that is non-conforming, any alteration, repair, or improvement shall be undertaken only if said nonconformity is not furthered, extended, or replaced.
- (l) Prior to any proposed alteration or relocation of any channels or of any watercourse, stream, etc., within the City of Norfolk a permit shall be obtained from the U. S. Army Corps of Engineers, the Virginia Department of Environmental Quality, and the Virginia Marine Resources Commission.

Furthermore, notification of the proposal shall be given by the applicant to all affected adjacent jurisdictions, the Department of Conservation and Recreation, Division of Dam Safety and Floodplain Management, and the Federal Insurance and Mitigation Administration.

- (m) The flood carrying capacity within an altered or relocated portion of any watercourse shall be maintained.
- (n) An Elevation Certificate and, if applicable, a flood-proofing certificate shall be provided prior to any foundation inspection, final inspections, and the issuance of any Certificates of Occupancy, in order to assure compliance with these floodplain regulations.

11-3.11 *Specific Standards for the Coastal High Hazard and Coastal Floodplain Districts.* In VE and Coastal A Zones, the following provisions shall apply:

- (a) All new construction and substantial improvements shall be elevated on pilings or columns such that:
 - (1) The bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated at or above the DFE; and

- (2) The pile or column foundation and structure attached thereto is anchored to resist flotation, collapse, and lateral movement due to the effects of wind and water loads acting simultaneously on all building components, where the wind and water loading values are those that each have a one percent (1%) chance of being equaled or exceeded in any given year (one-percent annual chance).
- (b) A registered professional engineer or architect shall develop or review the structural design, specifications and plans for the construction, and shall certify that the proposed design and methods of construction are in accordance with accepted standards of practice for meeting the provisions of subsection (a), above using the Coastal Zone Design Certificate as provided by the City of Norfolk.
- (c) The Zoning Administrator or his designee shall obtain the elevation (in relation to mean sea level) of the bottom of the lowest horizontal structural member of the lowest floor (excluding pilings and columns) and shall maintain a record of such information.
- (d) All new construction shall be located landward of the reach of mean high tide.
- (e) For new construction and substantial improvements, the space below the lowest floor shall be maintained free of obstruction and the usage of breakaway walls at or below the DFE is prohibited.
- (f) The space below the lowest floor shall be used solely for parking of vehicles, building access, or storage. Such space shall not be partitioned into multiple rooms, temperature-controlled, or used for human habitation.
- (g) The use of fill for structural support of a building or structure is prohibited. When fill is proposed, appropriate engineering analyses shall be conducted to evaluate the impacts of the fill prior to issuance of any development permit.
- (h) The intentional alteration of a Coastal Primary Sand Dune, as defined by state law (Code of Virginia Title 28.2), which causes an increase in the likelihood of flood damage is prohibited.
- (i) All manufactured homes and recreational vehicles to be placed or substantially improved within VE and Coastal A Zones on the FIRM must meet the standards of subsections (a) through (h), above, and section 11-3.10.

11-3.12 *Specific Standards in the Floodplain District.* In AE and AH Zones, the following provisions shall apply:

- (a) *Residential Construction.* New construction or substantial improvement of any residential structure (including manufactured homes) shall have the lowest floor (including basement) elevated at or above the DFE or the elevation required by the Virginia Uniform Statewide Building Code, whichever is higher.
- (b) *Non-Residential Construction.* New construction or substantial improvement of any commercial, industrial, or non-residential building, other than an accessory building, shall have the lowest floor (including basement) elevated at or above the DFE or the elevation required by the Virginia Uniform Statewide Building Code, whichever is greater. Such non-residential buildings located in AE and AH Zones may be flood-proofed in lieu of being elevated, provided that all areas of the building components below the DFE are watertight, with walls substantially impermeable to the passage of water, and use structural components capable of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A registered professional engineer or architect shall certify that all applicable engineering standards are satisfied.
- (c) *Buildings with enclosed spaces below DFE.* For all new construction or substantial improvements to an existing building, other than an accessory building, any enclosed space below the DFE shall:
 - (1) Not be designed or used for human habitation, but shall only be used for parking of vehicles, building access, or limited storage. Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door), limited storage (standard exterior door or access panel) or entry to the building access (stairway or elevator).
 - (2) Be constructed entirely of flood resistant materials below the DFE.
 - (3) Include measures to automatically equalize hydrostatic flood forces on walls by allowing for the entry and exit of floodwaters. To meet this requirement, the openings either must be certified by a professional engineer or architect as meeting these hydrostatic standards or must meet the following minimum design criteria:
 - (i) Provide a minimum of two (2) openings on different

sides of each enclosed area subject to flooding.

- (ii) All openings must either:
 - (A) Have a net area not less than one (1) square inch for each one (1) square foot of enclosed area subject to flooding; or
 - (B) Be certified by a professional engineer or architect as providing adequate water flow capacity given the extent of the enclosed area subject to flooding.
 - (iii) If a building has more than one (1) enclosed area, each area must have openings to allow floodwaters to automatically enter and exit.
 - (iv) The bottom of all required openings shall be no higher than one (1) foot above the adjacent grade.
 - (v) Openings may be equipped with screens, louvers, or other coverings or devices, provided they permit the automatic flow of floodwaters in both directions.
 - (vi) A foundation enclosure made of flexible skirting is not considered an enclosure for purposes of these floodplain regulations, and, therefore, does not require openings. A foundation made of masonry or wood underpinning, regardless of structural status, is considered an enclosure and requires the openings described above.
- (d) *Accessory Buildings:* For any new construction or substantial improvement of any accessory building, the building shall be constructed entirely of flood resistant materials below the DFE and:
- (1) When no space below the BFE is enclosed, the lowest floor shall be elevated at or above the BFE.
 - (2) When any space below the BFE is enclosed, the building shall only be used for parking of vehicles or limited storage, and shall comply with the requirements set forth in subsection (c)(3), above.
- (e) *Manufactured Homes and Recreational Vehicles.* The following requirements shall apply to all Manufactured Homes and

Recreational Vehicles located in any AE or AH Zone:

- (1) Any newly placed or substantially improved manufactured home shall be elevated so that the lowest floor is at or above the DFE and shall meet all other general standards set forth in section 11-3.10 that apply to new construction.
- (2) All recreational vehicles must either:
 - (i) Be removed after being located on a site for 180 consecutive days and be fully licensed and ready for highway use. (A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick-disconnect type utilities and security devices, and has no permanently attached additions); or
 - (ii) Meet all the requirements for manufactured homes set forth above.

11-3.13 *Specific Standards for Other Flood Areas.* In X (Shaded) Zones, the following requirements shall apply:

- (a) All new construction shall have the lowest floor, including basement, elevated or flood-proofed to one and one-half (1.5) feet above the highest grade immediately adjacent to the structure.
- (b) For purposes of applying the limitations set forth in Chapter 12, "Nonconformities," any structure lawfully constructed prior to January 1, 2014, which does not meet this requirement shall not be considered nonconforming with respect to these floodplain regulations.

11-3.14 *Standards for Subdivision Proposals.*

- (a) All subdivision proposals shall be consistent with the need to minimize flood damage;
- (b) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage;
- (c) All subdivision proposals shall have adequate drainage provided to reduce exposure to flood hazards; and
- (d) Flood zone and BFE data delineating the location of the flood zones

on the property shall be provided for all subdivision proposals and other development proposals (including manufactured home parks and subdivisions).

11-3.15 *Existing structures in Special Flood Hazard Areas.* A structure lawfully constructed prior to January 1, 2014, but which is not in conformity with these floodplain regulations must comply with all of the following limitations that apply:

- (a) *Severe repetitive loss damage.* An existing structure that has suffered severe repetitive loss damage may be reconstructed as follows:
 - (1) If the reconstruction is limited to repairs only and does not involve the replacement or alteration of any structural element, then the reconstruction may be allowed provided that all requirements of the Virginia Uniform Statewide Building Code are met.
 - (2) If the reconstruction involves the replacement or alteration of any structural element, then the reconstruction shall only be permitted if, after the work is completed, the entire structure complies with these floodplain regulations.
- (b) *Substantial damage or substantial improvement.* The reconstruction of an existing structure that has suffered substantial damage or for which a substantial improvement is proposed shall only be permitted if, after the work is completed, the entire structure complies with all requirements of the Virginia Uniform Statewide Building Code and this zoning ordinance, including these floodplain regulations and the applicable limitations of Chapter 12.
- (c) *Improvement other than substantial improvement.* Any improvement, other than a substantial improvement, proposed to an existing structure may be permitted when the following requirements are met:
 - (1) The improvement proposed for the existing portion of the structure complies with all requirements of the Virginia Uniform Statewide Building Code; and
 - (2) Any proposed addition, conversion of a non-habitable area to a habitable area, or structural alteration shall only be permitted if the proposed work complies with all requirements of the Virginia Uniform Statewide Building Code and this zoning ordinance, including these floodplain regulations.

11-3.16 *Variances.* The Board of Zoning Appeals has the power to authorize, upon

application, variances from the regulations of this overlay district.

(a) *Factors to be considered.* The Board of Zoning Appeals shall consider the following factors, in addition to the requirements of Chapter 22, "Variances," prior to granting any variance from the regulations of this overlay district:

- (1) The showing of good and sufficient cause.
- (2) The danger to life and property due to increased flood heights or velocities caused by encroachments. No variance shall be granted for any proposed use, development, or activity that will cause any increase in the BFE.
- (3) The danger that materials may be swept on to other lands or downstream to the injury of others.
- (4) The proposed water supply and sanitation systems and the ability of these systems to prevent disease, contamination, and unsanitary conditions.
- (5) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owners.
- (6) The importance of the services provided by the proposed facility to the community.
- (7) The requirements of the facility for a waterfront location.
- (8) The availability of alternative locations not subject to flooding for the proposed use.
- (9) The compatibility of the proposed use with existing development and development anticipated in the foreseeable future.
- (10) The relationship of the proposed use to the comprehensive plan and floodplain management program for the area.
- (11) The safety of access by ordinary and emergency vehicles to the property in time of flood.
- (12) The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters expected at the site.

- (13) The repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.
- (14) Such other factors which are relevant to the purposes of this overlay district.

The Board of Zoning Appeals may refer any application and accompanying documentation pertaining to any request for a variance to any engineer or other qualified person or agency for technical assistance in evaluating the proposed project in relation to flood heights or velocities and the adequacy of the plans for flood protection and other related matters.

- (b) *Required Findings.* Variances shall be issued only after the Board of Zoning Appeals has determined that the variance will be the minimum required to provide relief and that the granting of such will not result in any of the following:
 - (1) Unacceptable or prohibited increases in flood heights;
 - (2) Additional threats to public safety;
 - (3) Extraordinary public expense;
 - (4) Any nuisance;
 - (5) Fraud or victimization of the public; or
 - (6) Conflict with local laws or ordinances.
- (c) *Notification.* The Board of Zoning Appeals shall notify the applicant for a variance, in writing, that the issuance of a variance to construct a structure below the BFE:
 - (1) Will increase the risks to life and property; and
 - (2) Will result in increased premium rates for flood insurance or the inability to obtain flood insurance through the NFIP.

A record shall be maintained of the above notification as well as all approved variances from the provisions of this overlay district, including justification for the issuance of each variance. Any variances that are issued shall be noted in the annual or biennial report submitted to the Federal Insurance Administrator.

LANGUAGE RECOMMENDED BY THE PLANNING COMMISSION

EXHIBIT A

2-3 Definitions.

...

Building height. The height of any structure or building measured as the vertical distance between the Roof Line and the Base, excluding any ancillary mechanical equipment, cupolas, chimneys, church steeples, flagpoles, rooftop penthouses for elevators or stairways, and similar ancillary features. For purposes of this definition only:

- (a) The term "Roof Line" shall mean:
 - (1) For a flat roof, the highest point of the roof surface;
 - (2) For a mansard roof, the deck line; and
 - (3) For a gable, hip or gambrel roof, the mean point between eaves and ridge.
- (b) The term "Base" shall mean:
 - (1) For principal structures, either the ground immediately adjacent to the structure at the midpoint of its main entrance or the Design Flood Elevation as defined in Chapter 11-3 of this ordinance, whichever is higher; and
 - (2) For all other structures, including accessory structures, the ground immediately adjacent to the structure at the midpoint of its main entrance.

...

EXHIBIT B

11-3 Floodplain/Coastal Hazard Overlay Districts FPCHO.

11-3.1 *Purpose.*

- (a) *Intent.* It is the intent of these regulations to permit the creation of Floodplain, Coastal Floodplain and Coastal High Hazard Districts in areas designated by the Federal Emergency Management Agency (FEMA) as "Special Flood Hazard Areas" and other areas identified as likely to benefit from floodplain management. Regulations within such districts are intended to prevent the loss of property and life, the creation of health and safety hazards, the disruption of commerce and governmental services, the extraordinary and unnecessary expenditure of public funds for flood protection and relief, and the impairment of the tax base, all of which adversely affect the public health, safety, and general welfare. These flood losses are attributed to the cumulative effect of obstructions located in areas of special flood hazard, and the occupancy of areas of special flood hazard by uses and structures vulnerable to flood damage or structures inadequately elevated, anchored or flood-proofed.
- (b) *Scope of Regulations.* To accomplish these purposes, it is necessary to:
 - (1) Regulate uses, activities and development which, acting alone or in combination with other existing or future uses, activities and development, will cause unacceptable increases in flood heights, velocities and frequencies.
 - (2) Restrict or prohibit certain uses, activities and development from locating within certain areas of special flood hazards.
 - (3) Require all those uses, activities and development that do occur in areas of special flood hazards to be protected and/or flood-proofed against flooding, flood damage and wind damage.
 - (4) Protect individuals from buying lands and structures which are unsuited for certain purposes because of flood hazards.
 - (5) To ensure that adequate drainage is provided to reduce exposure to flood hazards.

- (c) *Findings.* The degree of flood protection sought by the provisions of this overlay district is considered reasonable for regulatory purposes and is based on acceptable engineering methods of study. Larger floods may occur. Flood heights may be increased by man-made or natural causes. This overlay district does not imply that districts outside the floodplain district or that land uses permitted within such district will be free from flooding or flood damages.

11-3.2 *Applicability.* The boundaries of the "Special Flood Hazard Areas" and "Other Flood Areas" shall be designated by the "Flood Insurance Study" (FIS) issued by FEMA and shown on the city's Flood Insurance Rate Map (FIRM) dated September 2, 2009, as amended. This map, as amended, is declared to be part of this ordinance and shall be kept on file in the offices of the Building Official and of the Zoning Administrator. The components of the "Special Flood Hazard Areas" and "Other Flood Areas" shall be:

- (a) Coastal High Hazard District (VE)
- (b) Coastal Floodplain District (Coastal A)
- (c) Floodplain District (AE and AH)
- (d) Other Flood Areas (X Shaded)

11-3.3 *Compliance and Liability.* No land shall hereafter be developed and no structure shall be located, relocated, constructed, reconstructed, enlarged, structurally altered or structurally improved nor any manufacture home placed on a lot or approved for utility service except in full compliance with the terms and provisions of this section and any other applicable ordinances and regulations.

Any development which alters or relocates a watercourse shall not diminish the flood-carrying capacity within the altered or relocated portion of the watercourse. Prior notification of any proposed development which would alter or relocate a watercourse in the City of Norfolk shall be provided to all affected, adjacent municipalities, the Federal Insurance Administration, and the Virginia Department of Conservation and Recreation or other state coordinating agency designated to assist with the National Flood Insurance Program. No new construction or development shall cause an increase of more than one foot, measured at any point, in the elevation of the water level of a one-hundred-year flood.

Records of actions associated with administering this overlay district shall be kept on file and maintained by the Zoning Administrator or his designee.

This section shall not create liability on the part of the City of Norfolk or

any officer or employee thereof for any flood damages that result from reliance on this overlay district or any administrative decision lawfully made there under.

11-3.4 *Abrogation and Greater Restrictions.*

The Special Flood Hazard Areas and Other Flood Areas as described above shall be overlays to the existing underlying districts as shown on the official zoning map, and as such, the provisions set forth in these floodplain regulations shall operate in conjunction with the underlying district provisions, as set forth in section 11-0. If there is any conflict between the provisions or requirements of this overlay district and those of any underlying district, the more restrictive provisions shall apply.

11-3.5 *Severability.* If any section, subsection, paragraph, sentence, clause, or phrase of this overlay district shall be declared invalid for any reason whatever, such decision shall not affect the remaining portions of this overlay district. The remaining portions shall remain in full force and effect; and for this purpose, the provisions of this overlay district are hereby declared to be severable.

11-3.6 *Penalty for violations.* Any person who fails to comply with any of the requirements or provisions of this article or directions of the Zoning Administrator or his designee shall be guilty of a misdemeanor and subject to the penalties therefore.

In addition to the above penalties, all other actions are hereby reserved, including an action in equity for the proper enforcement of this article. The imposition of a fine or penalty for any violation of, or noncompliance with, this article shall not excuse the violation or noncompliance or permit it to continue; and all such persons shall be required to correct or remedy such violations or noncompliances within a reasonable time. Flood insurance may be withheld from structures constructed in violation of this article.

11-3.7 *Definitions.* For the purpose of these floodplain regulations, the following definitions shall apply:

Base flood: The flood having a one percent chance of being equaled or exceeded in any given year.

Base flood elevation (BFE): The elevation in feet of the one percent (1%) annual chance flood level, as shown in the FIS and FIRM.

Basement: Any area of a building having its floor sub-grade (below ground level) on all sides.

Breakaway wall: A wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces, without causing damage to the elevated portion of the building or supporting foundation system.

Coastal Floodplain District: Those areas identified as Coastal A Zones that have been delineated as being subject to wave heights between 1.5 feet and 3 feet and identified on the FIRM as areas of Limits of Moderate Wave Action (LiMWA).

Coastal High Hazard District: Those areas identified as VE Zones on the FIRM extending from offshore to the inland limit of the Coastal Primary Sand Dune, as defined by state law (Code of Virginia Title 28.2), and subject to wave heights of three (3) feet or more.

Damage, repetitive loss:

- (a) Flood related damages to a structure sustained on two (2) separate occasions during a ten (10) year period for which the cost of repairs at the time of each flood event, on the average, equals or exceeds twenty-five percent (25%) of the market value of the structure before the most recent damage occurred; or
- (b) Flood related damages to a structure sustained over a ten (10) year period for which the total cost of damages equals or exceeds fifty percent (50%) of the market value of the structure before the most recent damage occurred.

Damage, substantial. Damage, of any origin, sustained by a structure for which the cost of restoring the structure to its condition before the damage occurred would equal or exceed fifty percent (50%) of the market value of the structure before the damage occurred.

Design Flood Elevation (DFE): The BFE plus the freeboard required by this ordinance.

Development: Any man-made change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

Elevation Certificate: A document, prepared by a professional land surveyor, engineer, or architect, that verifies elevation and floodplain data of a structure relative to the ground level.

Encroachment: The advance or infringements of uses, plant growth, fill, excavation, buildings, permanent structures or development into a floodplain, which may impede or alter the flow capacity of a floodplain.

Flood or flooding:

- (a) A general or temporary condition of partial or complete inundation of normally dry land areas from either of the following:
 - (1) The overflow of inland or tidal waters; or
 - (2) The unusual and rapid accumulation or runoff of surface waters from any source.
- (b) The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in subparagraph (a)(1) of this definition.
- (c) Mudflows which are proximately caused by flooding as defined in subparagraph (a)(2) of this definition and are akin to a river of liquid and flowing mud on the surface of normally dry land areas, as when earth is carried by a current of water and disposed along the path of the current.

Floodplain or flood-prone area: Any land area susceptible to being inundated by water from any source

Floodplain District: Those areas designated as AE and AH Zones on the FIRM for which a one percent (1%) annual chance of flood elevations have been identified.

Flood Insurance Rate Map (FIRM): The official map on which FEMA has delineated both the Special Flood Hazard Areas and Other Flood Areas within the city. The FIRM may be available digitally.

Freeboard: The vertical distance between the BFE and the local minimum required lowest elevation in the AE, AH, VE, and Coastal A Zones that provides additional protection for the unknown or unquantified factors that could contribute to greater flood heights.

Historic structure: Any structure that is:

- (a) Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
- (b) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district; or
- (c) Individually listed on the Virginia Landmarks Register.
- (d) Designated individually as a landmark or as a contributing structure within a locally designated historic district, to the extent such designation is permitted under and done in accordance with provisions of Chapter 9 or this ordinance.

Lowest floor: The lowest floor of the lowest enclosed area (including basement). An unfinished or flood-resistant enclosure, usable solely for parking of vehicles, building access or limited storage in an area other than a basement area is not considered a building's lowest floor; provided, that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of Federal Code 44 CFR § 60.3.

Manufactured home: A structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. For floodplain management purposes the term manufactured home also includes park trailers, travel trailers, and other similar vehicles placed one a site for greater than 180 consecutive days.

Manufactured home park or subdivision: A parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

New construction: Structures for which the "start of construction" commenced on or after August 1, 1979.

Other Flood Areas: Those areas identified as X (Shaded) on the FIRM for which there is a one-fifth percent (0.2%) annual chance of flooding.

Recreational vehicle: A vehicle which is:

- (a) Built on a single chassis;

- (b) Measures four hundred (400) square feet or less when measured at the largest horizontal projection;
- (c) Designed to be self-propelled or permanently towed by a light duty truck; and
- (d) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational camping, travel, or seasonal use.

Repetitive loss damage: See "Damage, repetitive loss."

Shallow flooding area: A special flood hazard area with base flood depths from one (1) to three (3) feet where a clearly defined channel does not exist. Such flooding is characterized by ponding or sheet flow.

Special Flood Hazard Areas: The land in the floodplain subject to a one percent (1%) or greater annual chance of being flooded. These are designated as AE, AH, VE, and Coastal A on the FIRM.

Start of construction: The date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, substantial improvement or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation on the property of accessory structures, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of the construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

Substantial damage: See "Damage, substantial."

Substantial improvement: Any reconstruction, rehabilitation, addition, or other improvement of a structure the cost of which either:

- (a) Equals or exceeds fifty percent (50%) of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "repetitive loss damage" regardless of the actual repair work performed; or

- (b) Over a ten (10) year period, equals or exceeds fifty percent (50%) of the market value of the structure at the time of the most recent proposed improvement.

Notwithstanding the above, the term does not include any of the following:

- (a) Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions;
- (b) Any alteration of a "historic structure" provided that the alteration will not preclude the structure's continued designation as a "historic structure"; or
- (a) Any improvements associated solely with elevating a structure above the DFE.

Watercourse: A lake, river, creek, stream, wash, channel or other topographic feature on or over which waters flow at least periodically. Watercourse includes specifically designated areas in which substantial flood damage may occur.

11-3.8 *District Boundary Changes.* The delineation of any of the Special Flood Hazard Areas and Other Flood Hazard Areas may be revised by the City of Norfolk where natural or man-made changes have occurred and/or where more detailed studies have been conducted or undertaken by the U. S. Army Corps of Engineers or other qualified agency, or an individual documents the need for such change. However, prior to any such change, approval must be obtained from FEMA.

11-3.9 *Permit and Application Requirements.* All uses, activities, and development occurring within any floodplain district shall be undertaken only upon the issuance of a permit. Such development shall be undertaken only in strict compliance with the provisions of this ordinance, the Virginia Uniform Statewide Building Code, and all other applicable codes and ordinances. Prior to the issuance of any such permit, the Zoning Administrator or his designee shall require all applications to include compliance with all applicable state and federal laws. Under no circumstances shall any use, activity, and/or development adversely affect the capacity of the channels or floodways of any watercourse, drainage ditch, or any other drainage facility or system.

All applications for development within any Special Flood Hazard Area and all building permits issued for the floodplain shall incorporate the following information.

- (a) For any rehabilitation, installation of new electrical or mechanical systems, or any structural repair with an estimated cost that is less than fifty percent (50%) of the market value of the structure, a current Elevation Certificate sealed by a licensed design professional is required.
- (b) For any addition, any conversion of any non-habitable space to habitable space, or the construction or installation of a new accessory structure that requires a building permit:
 - (1) A current Elevation Certificate sealed by a licensed design professional, and
 - (2) A physical survey, performed after the effective date of the FIRM that,
 - (i) Accurately depicts current improvements on the property,
 - (ii) Provides a flood zone determination and the BFE at the site, and
 - (iii) Delineates the location of the flood zones on the property.
- (c) For new construction and any substantial improvement of a principal structure:
 - (1) A proposed site plan sealed by a design professional that provides:
 - (i) Topographic data;
 - (ii) Proposed grades, grading and stormwater management;
 - (iii) All proposed structures and improvements;
 - (iv) Proposed finished floor elevations of structures;
 - (v) Flood zone determination and BFE with the FIRM reference, and

- (vi) All other information as required by any applicable provision of Chapter 26, "Site Plan Review" or Section 11-2, "Chesapeake Bay Preservation Area Overlay District."
- (2) An Elevation Certificate based on the proposed development showing compliance with these floodplain regulations.
- (3) For non-residential structures proposed to be flood-proofed, a flood-proofing certificate based on the proposed development showing compliance with these floodplain regulations.
- (d) Any additional information deemed by the Zoning Administrator to be necessary to perform the required review.

11-3.10 *General Standards.* In the Floodplain, Coastal Floodplain and Coastal High Hazard districts the following provisions shall apply:

- (a) The Freeboard shall be three (3) feet.
- (b) Any new construction or substantial improvement to principal residential structures shall be a set back a minimum of twenty (20) feet from mean high water.
- (c) For residential construction, the lowest floor shall not be below grade on all sides.
- (d) New construction and substantial improvements shall be built in accordance with the Virginia Uniform Statewide Building Code, and anchored to prevent flotation, collapse or lateral movement of the structure and all portions at or below the DFE shall be constructed of materials resistant to flood damage.
- (e) Manufactured homes shall be anchored to prevent flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This standard shall be in addition to and consistent with the Virginia Uniform Statewide Building Code.
- (f) New construction or substantial improvements shall be constructed using methods and practices that minimize flood damage.

- (g) Electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities, including ductwork, shall be:

- (1) Elevated and installed at or above the DFE; or

- (2) Designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding or as allowed by the Virginia Uniform Statewide Building Code and ductwork shall be installed a minimum of one (1) foot above the BFE.

- (h) New and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.

- (i) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters.

- (j) On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding.

- (k) For any structure that is non-conforming, any alteration, repair, or improvement shall be undertaken only if said nonconformity is not furthered, extended, or replaced.

- (l) Prior to any proposed alteration or relocation of any channels or of any watercourse, stream, etc., within this jurisdiction a permit shall be obtained from the U. S. Army Corps of Engineers, the Virginia Department of Environmental Quality, and the Virginia Marine Resources Commission.

Furthermore, notification of the proposal shall be given by the applicant to all affected adjacent jurisdictions, the Department of Conservation and Recreation, Division of Dam Safety and Floodplain Management, and the Federal Insurance and Mitigation Administration.

- (m) The flood carrying capacity within an altered or relocated portion of any watercourse shall be maintained.

- (n) An Elevation Certificate and, if applicable, a flood-proofing certificate shall be provided prior to any foundation inspection, final inspections, and the issuance of any Certificates of Occupancy, in order to assure compliance with these floodplain

regulations.

11-3.11 *Specific Standards for the Coastal High Hazard and Coastal Floodplain Districts.* In VE and Coastal A Zones, the following provisions shall apply:

- (a) All new construction and substantial improvements shall be elevated on pilings or columns such that:
 - (1) The bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated at or above the DFE; and
 - (2) The pile or column foundation and structure attached thereto is anchored to resist flotation, collapse, and lateral movement due to the effects of wind and water loads acting simultaneously on all building components, where the wind and water loading values are those that each have a one percent (1%) chance of being equaled or exceeded in any given year (one-percent annual chance).
- (b) A registered professional engineer or architect shall develop or review the structural design, specifications and plans for the construction, and shall certify that the proposed design and methods of construction are in accordance with accepted standards of practice for meeting the provisions of subsection (a), above.
- (c) The Zoning Administrator or his designee shall obtain the elevation (in relation to mean sea level) of the bottom of the lowest horizontal structural member of the lowest floor (excluding pilings and columns) and shall maintain a record of such information.
- (d) All new construction shall be located landward of the reach of mean high tide.
- (e) For new construction and substantial improvements, the space below the lowest floor shall be maintained free of obstruction and the usage of breakaway walls at or below the DFE is prohibited.
- (f) The space below the lowest floor shall be used solely for parking of vehicles, building access, or storage. Such space shall not be partitioned into multiple rooms, temperature-controlled, or used for human habitation.
- (g) The use of fill for structural support of a building or structure is

prohibited. When fill is proposed in a Coastal High Hazard district, appropriate engineering analyses shall be conducted to evaluate the impacts of the fill prior to issuance of any development permit.

- (h) The intentional alteration of a Coastal Primary Sand Dune, as defined by state law (Code of Virginia Title 28.2), which causes an increase in the likelihood of flood damage is prohibited.
- (i) All manufactured homes and recreational vehicles to be placed or substantially improved within VE and Coastal A Zones on the FIRM must meet the standards of subsections (a) through (h), above, and section 11-3.10.

11-3.12 *Specific Standards in the Floodplain District.* In AE and AH Zones, the following provisions shall apply:

- (a) *Residential Construction.* New construction or substantial improvement of any residential structure (including manufactured homes) shall have the lowest floor (including basement) elevated at or above the DFE or the elevation required by the Virginia Uniform Statewide Building Code, whichever is higher.
- (b) *Non-Residential Construction.* New construction or substantial improvement of any commercial, industrial, or non-residential building, other than an accessory building, shall have the lowest floor (including basement) elevated at or above the DFE or the elevation required by the Virginia Uniform Statewide Building Code, whichever is greater. Such non-residential buildings located in AE and AH Zones may be flood-proofed in lieu of being elevated, provided that all areas of the building components below the DFE are watertight, with walls substantially impermeable to the passage of water, and use structural components capable of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A registered professional engineer or architect shall certify that all applicable engineering standards are satisfied.
- (c) *Buildings with enclosed spaces below DFE.* For all new construction or substantial improvements to an existing building, other than an accessory building, any enclosed space below the DFE shall:
 - (1) Not be designed or used for human habitation, but shall only be used for parking of vehicles, building access, or limited storage. Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door), limited storage (standard exterior door or access

panel) or entry to the building access (stairway or elevator).

- (2) Be constructed entirely of flood resistant materials below the DFE.
- (3) Include measures to automatically equalize hydrostatic flood forces on walls by allowing for the entry and exit of floodwaters. To meet this requirement, the openings either must be certified by a professional engineer or architect as meeting these hydrostatic standards or must meet the following minimum design criteria:
 - (i) Provide a minimum of two (2) openings on different sides of each enclosed area subject to flooding.
 - (ii) All openings must either:
 - (A) Have a net area not less than one (1) square inch for each one (1) square foot of enclosed area subject to flooding; or
 - (B) Be certified by a professional engineer or architect as providing adequate water flow capacity given the extent of the enclosed area subject to flooding.
 - (iii) If a building has more than one (1) enclosed area, each area must have openings to allow floodwaters to automatically enter and exit.
 - (iv) The bottom of all required openings shall be no higher than one (1) foot above the adjacent grade.
 - (v) Openings may be equipped with screens, louvers, or other coverings or devices, provided they permit the automatic flow of floodwaters in both directions.
 - (vi) A foundation enclosure made of flexible skirting is not considered an enclosure for purposes of these floodplain regulations, and, therefore, does not require openings. A foundation made of masonry or wood underpinning, regardless of structural status, is considered an enclosure and requires the openings described above.

- (b) *Accessory Buildings:* For any new construction or substantial

improvement of any accessory building, the building shall be constructed entirely of flood resistant materials below the DFE and:

- (1) When no space below the BFE is enclosed, the lowest floor shall be elevated at or above the BFE.
 - (2) When any space below the BFE is enclosed, the building shall only be used for parking of vehicles or limited storage, and shall comply with the requirements set forth in subsection (c)(3), above.
- (e) *Manufactured Homes and Recreational Vehicles.* The following requirements shall apply to all Manufactured Homes and Recreational Vehicles located in any AE or AH Zone:
- (1) Any newly placed or substantially improved manufactured home shall be elevated so that the lowest floor is at or above the DFE and shall meet all other general standards set forth in section 11-3.10 that apply to new construction.
 - (2) All recreational vehicles must either:
 - (i) Be removed after being located on a site for 180 consecutive days and be fully licensed and ready for highway use. (A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick-disconnect type utilities and security devices, and has no permanently attached additions); or
 - (ii) Meet all the requirements for manufactured homes set forth above.

11-3.13 *Specific Standards for Other Flood Areas.* In X (Shaded) Zones, the following requirements shall apply:

- (a) All new construction shall have the lowest floor, including basement, elevated or flood-proofed to one and one-half (1.5) feet above the highest grade immediately adjacent to the structure.
- (b) For purposes of applying the limitations set forth in Chapter 12, "Nonconformities," any structure lawfully constructed prior to January 1, 2014, which does not meet this requirement shall not be considered nonconforming with respect to these floodplain regulations.

11-3.14 *Standards for Subdivision Proposals.*

- (a) All subdivision proposals shall be consistent with the need to minimize flood damage;
- (b) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage;
- (c) All subdivision proposals shall have adequate drainage provided to reduce exposure to flood hazards; and
- (d) BFE data shall be provided for all subdivision proposals and other development proposals (including manufactured home parks and subdivisions).

11-3.15 *Variances; factors to be considered.* The Board of Zoning Appeals has the power to authorize, upon application, variances from the regulations of this overlay district and consider the following factors, in addition to the requirements of Chapter 22, "Variances":

- (a) The showing of good and sufficient cause.
- (b) The danger to life and property due to increased flood heights or velocities caused by encroachments. No variance shall be granted for any proposed use, development, or activity that will cause any increase in the BFE.
- (c) The danger that materials may be swept on to other lands or downstream to the injury of others.
- (d) The proposed water supply and sanitation systems and the ability of these systems to prevent disease, contamination, and unsanitary conditions.
- (e) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owners.
- (f) The importance of the services provided by the proposed facility to the community.
- (g) The requirements of the facility for a waterfront location.
- (h) The availability of alternative locations not subject to flooding for the proposed use.

- (i) The compatibility of the proposed use with existing development and development anticipated in the foreseeable future.
- (j) The relationship of the proposed use to the comprehensive plan and floodplain management program for the area.
- (k) The safety of access by ordinary and emergency vehicles to the property in time of flood.
- (l) The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters expected at the site.
- (m) The repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.
- (n) Such other factors which are relevant to the purposes of this overlay district.

The Board of Zoning Appeals may refer any application and accompanying documentation pertaining to any request for a variance to any engineer or other qualified person or agency for technical assistance in evaluating the proposed project in relation to flood heights or velocities and the adequacy of the plans for flood protection and other related matters.

11-3.16 *Required Findings.* Variances shall be issued only after the Board of Zoning Appeals has determined that the variance will be the minimum required to provide relief and that the granting of such will not result in any of the following:

- (a) Unacceptable or prohibited increases in flood heights;
- (b) Additional threats to public safety;
- (c) Extraordinary public expense;
- (d) Any nuisance;
- (e) Fraud or victimization of the public; or
- (f) Conflict with local laws or ordinances.

11-3.17 *Notification.* The Board of Zoning Appeals shall notify the applicant for a

variance, in writing, that the issuance of a variance to construct a structure below the BFE:

- (a) Will increase the risks to life and property; and
- (b) Will result in increased premium rates for flood insurance.

A record shall be maintained of the above notification as well as all approved variances from the provisions of this overlay district, including justification for the issuance of each variance. Any variances that are issued shall be noted in the annual or biennial report submitted to the Federal Insurance Administrator.

11-3.18 *Existing structures in Special Flood Hazard Areas.* A structure lawfully constructed prior to January 1, 2014, but which is not in conformity with these floodplain regulations shall be subject to the following limitations:

- (a) Any alteration, repair or improvement to a building, excluding any addition, shall only be permitted if the cost of all proposed work does not exceed fifty percent (50%) of the market value of the structure and all proposed work complies with all requirements of the Virginia Uniform Statewide Building Code;
- (b) Any substantial improvement or any repair of a structure that has suffered repetitive loss damage shall only be permitted if, after the work is completed, the entire structure complies fully with these floodplain regulations and all requirements of the Virginia Uniform Statewide Building Code; and
- (c) Any repair or reconstruction of a structure that has suffered substantial damage, any addition to a building, or any conversion of an existing, non-habitable area to a habitable area shall only be permitted if all proposed work complies with the requirements of this zoning ordinance, including but not limited to the limitations of Chapter 12, and the Virginia Uniform Statewide Building Code.

Comments on Proposed Revisions

Comment	Staff Response	Source of Comment
Who would bear the cost of raising a house to meet current requirements.	The owner of the property would be responsible for the costs of compliance along with their flood insurance. The city is actively pursuing assistance for property owners to comply and mitigate for flood problems	Community Meeting 1
Prospective homebuyers need to receive disclosure of prior water damage.	Flood zone disclosure is not required by the Commonwealth of VA. Requiring disclosure of prior damage is difficult due to insurance privacy. Records of improvements will be a part of record keeping if changes are adopted; these will be available for disclosure.	Community Meeting 2 and HRRRA/TBA meeting
The proposed changes make sense but more technical expertise will be needed to evaluate the cost impact to a typical new construction/renovation project.	The cost to elevate to meet the 3-foot freeboard will be recovered in the 5-8 years of mortgage based on the savings in flood insurance premiums. For renovations, there should be a nominal impact to meet proposed requirements.	Community Meeting 2
Restrict/limit/not allow ductwork below the 3 foot freeboard or require that construction is easily accessible and replaceable.	Ductwork will be required to be elevated 1 foot above BFE and also will be required to be built to resist floatation and to prohibit the accumulation of water (floodproofed) if below the DFE.	Community Meeting 3
Retention of information about past improvements to structures is vital for prospective homeowners.	Information on permits within Special Flood Hazard Area will be stored and filed and will be accessible.	HRRRA/TBA meeting
Other localities are looking to gain 1 foot credit for imposing 1/2 foot of freeboard.	Credit for 3 feet of freeboard by imposing a required 2.5 feet of freeboard may reduce insurance premiums for some policies but does not count toward CRS credit for the city. The need for protection from flood waters is as important as the insurance premiums and the cost of 1/2 foot higher of construction is nominal.	HRRRA/TBA meeting
The new requirements will devalue my residence.	Residences that are not in a flood zone or have not suffered flood damage will not be adversely affected by the changes. Properties that need major renovations or have major damage will have to comply with regulations, the increased resilience gained from compliance may increase the value of the home.	Phone Call and Letter of opposition
Structures will be required to be raised 5 feet higher with the regulations.	Proposed regulations allow for ductwork to be 1 foot above BFE (see above). The proposed freeboard is to be increased to 3 feet causing new construction to only be 2 feet higher than what is currently required.	Letter of opposition
New housing meeting these requirements will be incompatible with existing neighborhoods.	Neighborhood compatibility is only reviewed within Historic Districts and requires approval through the Design Review process. The proposed changes help to mitigate flooding and improve the resiliency of structures.	Letter of opposition

Comments on Proposed Revisions

Comment	Staff Response	Source of Comment
Requiring the higher finished floor will cause ADA accessibility issues.	Limitations will exist due to the need to provide access to structures. Designers will have to be creative in trying to comply both with the floodplain regulations and other applicable codes or ordinances.	Letter of opposition and Community Meeting 3
Sheds and garages will be required to be built 5 feet off the ground.	Sheds and garages are permitted to be built within the floodplain as long as they are constructed of flood resistant materials, contain flood vents, and all other electrical/mechanical components are elevated at or above the DFE.	Community Meeting 1 and letter of opposition
Where will mean high water be measured from?	Environmental Services in the Planning Department retains an updated list of mean high water along the coast lines of the city. This list is updated by Public Works - Stormwater and will be provided upon request to any applicant, citizen or property owner.	Community meeting 3
Other localities are proposing a waiver process for substantial improvements to existing structures above the BFE but below the DFE. Has this been considered?	For certain circumstances, a variance can be requested from the Board of Zoning Appeals for relief from the regulation. Findings for a variance require something unique about the land that makes it not feasible to comply with the current requirements. The risk of flooding has been identified and the regulations for these areas should be uniformly enforced for all improvements.	HRRR/TBA meeting
The 10 year Cumulative Substantial Damage and Improvements is a dramatic change from the current requirement. A five (5) year time frame would more appropriate.	Structures that have been damaged over multiple years should be properly protected if the total damage is over 50% of the market value.	HRRR and TBA
Will the city approach property owners that are repetitively damaged to purchase the home and turn the space into open space?	The current effort is to protect citizens and property. Over time it may be necessary to purchase some properties that can provide a benefit in flooding areas as open space.	Community meeting 4



May 9, 2013

Dear Civic League President:

The City Planning Commission is considering amending Norfolk's floodplain regulations to provide a potential increase in flood protection for new homes as well as those undergoing major renovation. The actions may reduce flood insurance premiums for homeowners. Prior to the public hearing on June 27, 2013, Planning Department staff will be presenting the proposed changes and listening to the public at three community meetings:

Lamberts Point Community Center

1251 W. 42nd Street
Tuesday, May 14, 2013
6:30-8 p.m.

Mary D. Pretlow Library

111 W. Ocean View Avenue
Thursday, May 16, 2013
6:30-8 p.m.

Workforce Development Center

(Design Professional focused)
201 E. Little Creek Road
Friday, May 24, 2013
2-4 p.m.

Please share the attached flyer with your community. If you have any questions or would like additional information prior to the meetings, please contact Bobby Tajan on my staff at (757) 664-4756 or at Robert.Tajan@norfolk.gov. Information on the proposed changes is also available on the planning department website at www.norfolk.gov/planning.

Sincerely,

Frank M. Duke, AICP
Planning Director



City of NORFOLK

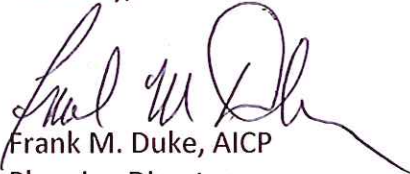
June 5, 2013

Dear Civic League President:

The City Planning Commission is considering amending Norfolk's floodplain regulations to provide increased flood protection requirements for new homes as well as those undergoing major renovation. The actions proposed may reduce flood insurance premiums for homeowners. This item is scheduled for the June 27, 2013 Planning Commission meeting.

If you have any questions or would like additional information prior to the public hearing, please contact Lenny Newcomb or Bobby Tajan at (757) 664-4752 or at Lenny.Newcomb@norfolk.gov or Robert.Tajan@norfolk.gov. Information on the proposed changes is also available on the planning department website at www.norfolk.gov/planning.

Sincerely,



Frank M. Duke, AICP
Planning Director



November 11, 2013

Dear Mayor Fraim,

Representing the Willoughby Civic League, this letter comes with words of appreciation, concern, and appeal.

APPRECIATION: We are grateful to you and the city council for hearing and acting upon our appeal in the letter of July 18 to mitigate some of the proposed provisions in the zoning ordinance amendments for floodplain areas of Norfolk. Also, we appreciate the time the Planning Department has taken on the phone and in person to help us further understand the codes in question.

CONCERNS: While due to our pursuit for change and clarification we are more informed, we feel that most of the potentially impacted residents in flood zones are not aware of the rationale and ramifications of the code revisions, nor with the impending increase in flood insurance costs, although in recent days there has been more publicity on that subject in the news, which may now have raised awareness and questions needing current city feedback. While public hearings were held last winter/spring on this subject, such hearings might now have more meaning to residents given the current publicity.

APPEAL: We recognize that Norfolk is attempting to mitigate the NFIP insurance increases by meeting certain FEMA criterion. However, another step would be efforts to join in the voices in Congress seeking a delay in the bill that will trigger these increases. Such delay could have the benefit of further study of other sources of revenue to offset the actuarial risks experienced by NFIP, and also might see communities move toward a healthier economic environment where insurance increases would have a less detrimental effect on the real estate market. Clearly, given the number of states represented and the bills in Congress asking for delay, this is a widely held concern. We request Norfolk leadership use your influence with our Virginia congressional leaders to successfully pass bills related to such postponement: HR 3218; HR 3013; HR 3156/1098. Again, our appreciation to you, the council, and city staff for your efforts on behalf of impacted Norfolk constituency.

Sincerely,

Erle Marie Latimer, President
Willoughby Civic League

cc: Council Members; Frank Duke, Director, Planning and Community Development

Willoughby Civic League, P.O. Box 8654, Norfolk, Virginia 23503
www.willoughbycivicleague.com



October 4, 2013

Dear Mayor Fraim,

This letter is a follow-up to our July 18, 2013 letter to you concerning the proposed revisions to the zoning ordinance impacting properties located within designated flood plains. Thank you and City Staff for the prompt response to our concerns. However, as more residents become aware of the issue, more questions are being asked.

We have received feedback from many residents since our last correspondence and have attached major areas of concern for your comments and review. (A more detailed list of specific questions is being sent to the Planning Department Staff). It becomes clear that this is a very serious issue of which the full impact on Norfolk residents will not be known until there is a complete understanding of the revised flood maps and flood insurance rates, which are not yet available. Therefore, we believe it is in the City's best interest to delay any public hearing on this matter until the revised maps and rates are received. Then, in consideration of this new information, proposed changes in the zoning ordinance should be processed through Staff and distributed to all Norfolk Civic Leagues for review and comment.

We look forward to continuing the dialogue with you, Council and Staff to resolve this serious matter.

Thank you again for your responsiveness and support.

Sincerely,

Erle Marie Latimer, President
Willoughby Civic League

cc: Council Members

ATTACHMENT: Resident Comments and Questions:

1. Based on questions we've received, there is a lack of understanding of many of the definitions, i.e. structure, structurally, obstruction, etc. and their practical application throughout the proposed ordinance.

Example: On page 10, the ordinance places the burden on the homeowner to prove they did not exceed the 50% limit. On page 12, replaced duct work must be at BFE or above. How will a two story home that has a low elevation comply?

2. Of major concern is when a homeowner is faced with complying with the proposed new ordinances when all insurance proceeds are exhausted. Is FEMA going to pay for the added cost of compliance?

3. How will the proposed ordinance affect homes built on a concrete slab foundation?

4. It is unclear from the current wording as to whether the prior year's assessment or current market value will be used to determine percentages listed throughout the ordinance.

5. Under the proposed ordinance, if two separate claims are filed within the cumulative period, are the claims added together and compared by the separate home values at the time of claims, or, is the most recent home value used?

6. What repair costs are included in determining whether you have exceeded any limits set forth in the ordinance?

7. What is the purpose of the City of Norfolk requiring a "Elevation Certificate" for any permit?

8. In the event a homeowner exceeds any defined limit within the proposed ordinance that would trigger elevation of the dwelling, and the homeowner has expensed all insurance available and does not have the resources to self-pay:

A. What resources are available from Federal or State government?

B. Or, lacking those funds, what resources are available from the City of Norfolk?

C. Lacking funds from either source listed above, what is the city's position on reoccupation of the dwelling?

9. Is the additional 5% community discount worth the potential jeopardy we are placing on our most vulnerable homeowners?

10. How will this impact condominiums, apartment buildings and other attached housing if a unit within the property has a claim that triggers the 50% code compliance while other units are unaffected?

Willoughby Civic League
P.O.Box 8654
Norfolk, VA. 23503

July 18, 2013

The Honorable Paul Fraim
Mayor of Norfolk
City Hall Building, 810 Union Street, Suite 1001
Norfolk, VA. 23510

Dear Mayor Fraim:

This correspondence is to highlight concerns of the Willoughby Civic League regarding the Zoning Ordinance Text Amendment to Chapter 2, etc. dated June 27, 2013 and its potential adverse impact to existing properties in Willoughby and the many flood prone neighborhoods in this city. We understand this will be coming to Council for approval shortly and wish to have our views considered.

We oppose the required "compliance with current regulations once the sum of damage and improvements over 10 year period exceeds 50% of market value of structure." We believe that non-flood related hazards or improvements should not be included in any cumulative period because relatively small hazards or improvements that put you over the 50% mark will trigger code compliance for elevation. Staff makes it clear that there are minimal government grant funds to raise these houses as 0 - 6 houses are reportedly being elevated in any given year at an average cost of \$146,000.00 (according to city website estimates). *Citizens impacted by this will be placed in a no win situation forced to choose between paying for the elevation, demolishing their home or facing the criminal penalties outlined in the proposed code.* It is unrealistic to believe that residents on lower, fixed and middle incomes would be able to carry this onerous burden which constitutes the majority of the impacted neighborhoods. Staff informs us that there are currently 893 properties throughout the city including Willoughby, Larchmont, Park Place, East Ocean View and Berkely that meet the definition of "repetitive loss". At this rate, it will take over 148 years to elevate all of the homes that currently meet the repetitive loss criteria and this number can only increase by adding non-flood related events to this total. Of additional concern is the fact that if homeowners meet the existing or proposed definition of repetitive loss and code compliance is triggered, there are no grant funds available for repetitive loss due to non-flood hazards and there are no guarantees they will meet FEMA's "cost benefit ratio" for flood related hazards which would eliminate any government grant monies that may be available to assist the property owner.

For these reasons, we request that you delay your vote until the proposal has been returned to staff and the Planning Commission for removal of the objectionable recommendations. The Willoughby Civic League stands ready and willing to meet with you personally or with your representative to discuss this issue.

Sincerely,

Erle Marie Latimer, President Willoughby Civic League
cc: Council Members; Planning; City Attorney; mentioned Civic Leagues

HAMPTON ROADS
REALTORS®
ASSOCIATION



October 21, 2013

The Honorable Paul D. Fraim
Mayor, City of Norfolk
810 Union Street
Norfolk, VA 23510

Dear Mayor Fraim:

The Hampton Roads REALTORS® Association has been following closely the City of Norfolk's review of and proposed changes to its floodplain ordinance, as well as those in other cities with the Hampton Roads region. As Hampton Roads continues to suffer from the damage of flooding events, it is only appropriate that the underlying development policies are reviewed in order to best protect existing and future properties.

The changes made to the National Flood Insurance Program last year only increase the need for this review. As grandfathered insurance policies are eliminated and others are brought up to the actuarial rates, homeowners and others with property located within a flood zone are sure to feel the pinch. Given the low-lying nature of the city and the abundance of water, this will impact a significant number of citizens in Norfolk.

However, participation in FEMA's Community Rating System (CRS) provides an avenue for some relief. Currently property owners in Norfolk receive a 5% discount associated with the city's participation in CRS. However, with a few reasonable amendments to the city's ordinance, the city's rating can be increased, and all property owners with a flood insurance policy will be afforded a 10% or even 15% discount on their premium. Participation will provide a real financial benefit to the city's citizens at minimal cost to the city, while also protecting future investments from potential damage.

The amendments must be reasonable though. Placing burdens on existing homeowners unrelated to flood risk mitigation or in a proportion which exceeds anticipated costs should be avoided. While we were mostly supportive of the revised ordinance as it appeared before the Planning Commission, there were some areas that we felt placed undue burdens on the city's residents and could be crafted better. Following your work session on the issue and the revisions that were made by staff based on Council's directions, our concerns have been addressed. At this point, we have no remaining concerns and believe the text amendment as proposed strikes the correct balance of protecting property from potential damage without unnecessarily burdening existing property owners. We support the revised ordinance as drafted and urge its passage.

As an association, we have had several discussions with city staff who have been incredibly helpful throughout the process. Frank Duke, Bobby Tajan, George Homewood, Leonard Newcomb, and others and have done excellent work and should be applauded for their diligent efforts on this revision.

Separate from the ordinance revision itself, there are two additional areas which we believe could use attention in order to best implement the changes. First, while unknown in quantity, there are a number of

The Hon. Paul Frain
October 21, 2013
Page 2

properties which meet or exceed the current design requirements but which would not conform to the proposed new requirements of three feet of freeboard and/or a twenty foot setback from water. These properties should be distinguished from other existing properties in a flood zone which do not meet even the current requirements. Understanding that an existing process exists for reviews and exceptions through the Board of Zoning Appeals (BZA), absent a new process for these properties, then either guidance should be issued to BZA for treating these properties differently or property owners need to be advised of their options and how to pursue them. Such property owners would undergo added hardship for limited benefit and deserve special consideration.

Secondly, the technology and associated data collection needed for these efforts to be successful cannot be overlooked. While separate from the particulars of this ordinance, the Planning Department and other city staff must have access to the tools necessary to collect and maintain the data to effectively monitor and enforce these requirements. Some of this is underway, but it must continue and additional resources, financial and otherwise, need to be made available as needs arise.

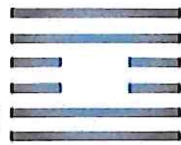
If you, any other members of City Council or Planning Department staff have any questions about our positions on these issues, please don't hesitate to contact HRRRA's Government Affairs Director, Andrew M. Sinclair, at asinclair@hrra.com or 757-473-9700. Thank you again for including us in this process and for your careful consideration of our comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Jimmy Jackson", written in a cursive style.

Jimmy Jackson
Government Affairs Chairman

Center for Real Estate



HAMPTON ROADS REALTORS® ASSOCIATION

June 25, 2013

Mr. Earl Fraley, Jr.
Chairman, Norfolk Planning Commission
810 Union Street, Suite 508
Norfolk, VA 23510

Dear Mr. Fraley:

The Hampton Roads REALTORS® Association (HRRA) has been following closely the City of Norfolk's review of and proposed changes to its floodplain ordinance. As Hampton Roads continues to suffer from the damage of flooding events, it is only appropriate that the underlying development policies are reviewed in order to best protect existing and future properties.

The changes made to the National Flood Insurance Program last year only increase the need for this review. As grandfathered insurance policies are eliminated and others are brought up to the actuarial rates, homeowners and others with property located within a flood zone are sure to feel the pinch. Given the low-lying nature of the city and the abundance of water, this will impact a significant number of citizens in Norfolk.

However, participation in FEMA's Community Rating System (CRS) provides an avenue for some relief. Currently property owners in Norfolk receive a 5% discount associated with the city's participation in CRS. However, with a few reasonable amendments to the city's ordinance, the city's rating can be increased, and all property owners with a flood insurance policy will be afforded a 10% or even 15% discount on their premium. Participation will provide a real financial benefit to the city's citizens at minimal cost to the city, while also protecting future investments from potential damage.

The amendments must be reasonable though. Placing burdens on existing homeowners unrelated to flood risk mitigation or in a proportion which exceeds anticipated costs should be avoided. While we have not yet been able to review the exact language of the proposed ordinance, many of the proposed changes seem to strike the appropriate balance (e.g., the change to measuring height elevation from the Design Flood Elevation), but there are a couple areas which we believe could use some modification.

Our first and primary concern regards the change to calculate cumulative substantial damage or improvement from the current practice of applying that provision to a single event. The Repetitive Loss provision adequately addresses property that suffers multiple flood damages. The Substantial Damage/Improvement provision then requires often costly compliance for properties regardless of their flooding history; the cost of raising the elevation of an existing home has been estimated as high as \$100,000 or more. Damage could occur from fire, wind, trees, or even vehicular accidents. Improvements could be in the form of additions or remodeling. While the desire to protect future investments is understandable, the change in calculation from a single incident to a ten year cumulative total is quite dramatic. Furthermore, unlike the Repetitive Loss provision, Substantial Damage/Improvement would have no impact on the availability of Increased Cost of Compliance (ICC) funds to affected property owners. Given the dramatic change from the current standard, the lack of



HAMPTON ROADS REALTORS® ASSOCIATION
638 Independence Parkway, Suite 100, Chesapeake, VA 23320
Phone: 757-473-9700 Fax: 757-473-9897
www.CenterforRealEstate.com

Mr. Earl Fraley, Jr.
June 21, 2013
Page 2

assistance provided for affected properties, and the lack of a connection between the damage and need for improvements, HRRRA cannot support a cumulative total calculation of more than five years.

Secondly, while unknown in quantity, there are a number of properties which meet or exceed the current design requirements but which would not conform to the proposed new requirements of three feet of freeboard and/or a twenty foot setback from water. These properties should be distinguished from other existing properties in a flood zone which do not meet even the current requirements. Understanding that an existing process exists for reviews and exceptions through the Board of Zoning Appeals (BZA), absent a new process for these properties, then either guidance should be issued to BZA for treating these properties differently or property owners need to be advised of their options and how to pursue them. Such property owners would undergo added hardship for limited benefit and deserve special consideration.

Finally, the technology and associated data collection needed for these efforts to be successful cannot be overlooked. While separate from the particulars of this ordinance, the Planning Department and other city staff must have access to the tools necessary to collect and maintain the data to effectively monitor and enforce these requirements. Some of this is underway, but it must continue and additional resources, financial and otherwise, need to be made available as needs arise.

In closing, I would be remiss if I did not mention the excellent work performed by city staff throughout this process. As an association, we have had several discussions with Frank Duke, Bobby Tajan, George Homewood, Leonard Newcomb, and others and have received excellent explanations where we had questions or concerns. Staff should be applauded for their diligent work on this effort.

If you, any other Planning Commission members, Planning Department staff, or members of City Council have any questions about our positions on these issues, please don't hesitate to contact HRRRA's Government Affairs Director, Andrew M. Sinclair, at asinclair@hrra.com or 757-473-9700. Thank you again for including us in this process and for your careful consideration of our comments.

Sincerely,



Jimmy Jackson
Governmental Affairs Chairman

Steven E. Lawson
President
Dennis M. Graf
Vice president
William "Toby" Harris
Associate vice president
Eric J. Sasser
Treasurer

I. Reese Smith Jr.
Secretary
S.L. "Sam" Cohen
Immediate past president
Channing A. Pfeiffer
Chief executive officer

Elected Builder Directors

Richard L. Bowie
Scott L. Crumley
Timothy S. Culpepper
Christopher J. Ettel
Lana L. O'Meara
Lucky C. Peterson
Douglas C. Smith
Erin Widener Speckhart

Elected Associate Directors

Thomas W. Dye
James R. Ferber
Michael P. Healy
Joseph W. Kesterson
Brenda K. Reid
Stephen Rockefeller
R. Steve Tinkham
Edward O. Yoder

Directors Emeriti

Edward P. Brogan
William J. Fanney
Paul J. Farrell
Richard D. Guy
Doyle E. Hull
Frederick J. Napolitano Sr.
Richard E. Olivieri
John H. Peterson Jr.
Stanley Waranch
Howard M. Weisberg
Wendell A. White

NAHB Past Presidents

Frederick J. Napolitano Sr.
Stanley Waranch

NAHB Life Directors

Edward P. Brogan
Lawrence J. Goldrich
Robert A. Lawson Jr.
Stephen J. Magula Jr.
Frederick J. Napolitano Sr.
Frederick J. Napolitano II
Vincent A. Napolitano
Michael D. Newsome
Michael P. Rashkind
Stanley Waranch
Howard M. Weisberg
Wendell A. White
Robert A. Widener

HBAV Past Presidents

Jeffrey W. Ainslie
Lee A. Gifford (deceased)
David A. Howard (deceased)
Frederick J. Napolitano Sr.
Vincent A. Napolitano
Michael D. Newsome
Theodore S. Schlossman
Douglas W. Talbot
Stanley Waranch

June 27, 2013

Matthew Hales
Norfolk Planning Commission
810 Union St. Suite 508
Norfolk, Virginia 23510

Dear Mr. Hales

Historically, almost 90% of all declared natural disasters include a flooding component. And as Norfolk continues to struggle with the challenges of flooding and sea level rise, it must find ways to prepare for and prevent flood damage from occurring.

The Norfolk Planning Commission and Planning Department by participating in FEMA's community rating system (CRS) have taken the first steps needed to solve this immediate problem. By voluntarily participating in this National Flood Insurance program, Norfolk has opened the doors to reduce flood damage to insurable property and is encouraging a comprehensive approach to floodplain management.

The CRS program uses a rating system of one through ten. One designated for a locality achieving the highest NFIP CRS rating, and ten being the lowest. It provides incentives of flood insurance premium discounts to communities that go beyond the minimum floodplain management requirements.

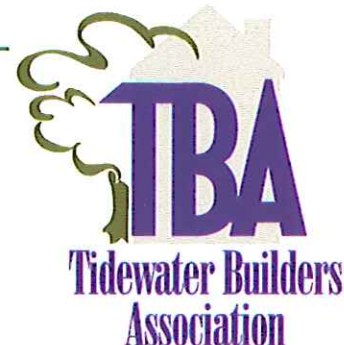
With 903 points, Norfolk currently maintains a CRS rating of 9 at a 5% rate reduction in insurance premiums. It is currently getting credit for the following activities:

Maintaining elevation certificates (56 points), outreach projects (10 points), providing flood protection information (21 points), conducting and adopting flood studies (52 points), preserving at least 5 acres in the special flood hazard area (37 points), **higher regulatory standards (343 points)**, flood data maintenance (94 points), storm water management (73 points), floodplain management planning (144 points), drainage system maintenance (15 points), and dam safety (55 points).

Given its current status, the city is able to easily reach a rating of 8, but according to the planning department the city is striving to obtain a 7. This will discount flood insurance premiums by 15%.

The new initiatives proposed to achieve this will not only help mitigate flood damage, but will also help make flood insurance more affordable for current and future residents.

The Tidewater Builder's Association (TBA) supports all of what Norfolk is currently doing to maintain its nine rating and further supports its goal to mitigate flood damage and obtain lower insurance premiums for the future.



However, we can not support the ten year cumulative Substantial Damage/Improvement provision outlined in the new ordinance, activity 430.

The activity forces homeowners and historical properties in the flood zone to meet strict cost prohibitive, logistically complicated construction requirements, and mandates that any home in the flood zone which acquires substantial damage, or is substantially improved to 50% percent of the homes current market value or more, must be raised to meet the new freeboard requirement of three feet above base flood elevation. A near impossibility given today's economic climate.

At the heart of our objection is the disadvantage this deals to lower and middle income residents, and to the many historical homes scattered throughout Norfolk.

Raising a home can be very costly, often more than its worth. It all depends on the type and size of the home, and the materials used to build it. **Simply put, residents just don't possess the wherewithal to make such a large transaction.**

Furthermore, homes that are damaged due to flooding are one thing. Those homes can access ICC funds up to 30k dollars for damages that possess at least some flood component. They would also fall under the repetitive loss component of the new ordinance. But this specific component doesn't include property that receives damage from non-flood related activity.

Therefore, if a home has a car run into it or if a tornado hits a house like what's recently happened in Suffolk and Gloucester, FEMA funds will not be granted and the homeowner themselves will have to bare the cost of raising a home. In many cases the home will effectively be condemned.

Also, brick used in the construction of historical homes to build the structure is old and deteriorating. **Historical homes 50 years of age or older may simply develop stress fractures and crumble.**

Logistically the ordinance will create a number of potential liability problems when the transfer of ownership is involved. What happens if a home was damaged and the new homeowner wasn't notified? Who guarantees the accuracy of the data provided to the new homeowner? Who guarantees flood title insurance and who will be the repository for all of the new data acquired?

TBA believes many of these initiatives have significant implications on residents who will simply refuse to do the work or do it themselves. Again, to apply this regulation cumulatively over the course of ten years is cost prohibitive, bad for historical properties and a logistical nightmare.

Mr. Matthew Hales
June 27, 2013
Page 3

TBA supports a Substantial Damage/Improvement provision for a one time event, not over a cumulative ten year period.

We also support instituting an option for a waiver for homes currently meeting the city's current base flood elevation.

Finally, Norfolk should focus on other options for achieving its desired goal instead of forcing homeowners and small businesses to bare the entire brunt of the new FEMA regulations.

For example, activity 330 Outreach Project (OP) allows for a community partnership with a group much like our own. In this activity, the community stakeholder provides educational material and lectures about flooding and its dangers to community groups like civic leagues and neighborhood associations.

We believe this will educate the community on how to better prepare for flooding thereby reducing damage and offsetting the credits lost in activity 430. Norfolk will still ultimately achieve its objective rating of 7 and mitigate flood damage.

Fortunately CRS provides many options and tools. It's up to us to take advantage of what's available.

The TBA commends the Planning Department on their hard work, easy access and transparency in this process. We look forward to participating in future conversations and are excited about the possibility of being a community partner with Norfolk in this endeavor.

Richard Wells Gresham, AIA, LEED AP

Vice President, / Head of Construction

E.T. GRESHAM COMPANY, Inc.

P.O. Box 1077 Norfolk, VA
23501-1077

May 30, 2013

City Council
City Hall Building
Norfolk, VA 23510

Re: **CHANGES TO THE FREEBOARD FLOOD ELEVATION**

Councilpersons,

As a Norfolk citizen / landowner I rely on you to make sound assessments of the impact changes proposed by City staff. This is especially true when considering the effects of raising the freeboard elevation. I would urge full consideration of the benefits and possible collateral damage to Norfolk's neighborhoods and property owners. However the proposed increase to three feet of freeboard may have significant implications that need to be carefully weighed.

As a practitioner who regularly deals with flood elevation issues, I see practical implications that need to be evaluated. If one assumes- as an example- that existing structures are at or near the existing 'flood' elevation (which is true of a great deal of Norfolk's real estate) some repercussions that concern me are:

Destruction of residential neighborhoods' fabric and integrity caused by infusing new or raised structures built up to 5 feet higher [freeboard + duct clearance + floor structure] than existing houses. New housing interjected into existing neighborhoods would have characteristics incompatible with the existing streetscapes. All that had been sought through initiatives like the *Norfolk Pattern Book* and other community preservation programs would be wasted. The new renovated housing would loom over adjoining structures and, of course, require major stairs, ramps, steps to access the primary floor.

The collateral financial impact of the de-valuation of existing housing and building stock could be considerable. Requiring building additions to perhaps be up to 5 feet higher than existing structures in most cases simply doesn't work. This will relegate homes and business structures obsolete or greatly devalued. Thus their marketability will plummet and slumming will occur even in some of Norfolk's most valuable neighborhoods. That homeownership, one of the most significant investment one strives to achieve in life, could be devalued by government fiat is very concerning to me.

Complications in complying to other codes needs to be considered. Having codes fighting other codes will hamstring designers, business owners, and residence as they strive to improve properties and communities. Two examples that come quickly to mind from recent projects are: First, Americans with Disabilities Act (ADA / Fair housing access requirements), and zoning regulations limiting the height of accessory structures. ADA ramping for a 5 foot elevation change could require 80 running feet of ramping and landings. Second, the zoning average roof height of 14' above grade for accessory buildings could hypothetically provide less than 9' after the elevation change - meaning 'sheds' might have nearly flat roof structures.

While changing the flood elevation will potentially protect many from flood damage losses- no elevation change will even begin to insure real safety from hurricane storm flooding. And if the freeboard increase is meant to keep up with changes in the rising flood elevation brought on by Norfolk "sinking" and / or global warming's impact, remember that over the last 50 years there has been only 4" to 6" increase and the forecast for the ensuing 50 years remains in measurements of inches-not feet. Thus a 3 foot freeboard increase, as I understand it, could be requiring mandating elevations not likely to be needed for a few hundred years.

For City government, this change would appear to be a clear win; the citizens would have greater protection from flooding and the infusion of federal funds would benefit municipal coffers. However I hope my comments will provide helpful input for your deliberations and that you will reconsider what I fear is an over zealous change affecting property owners throughout our City.

Yours very truly,



Richard Wells Gresham, AIA, LEED AP
P.O. Box 1077
Norfolk, VA 23501